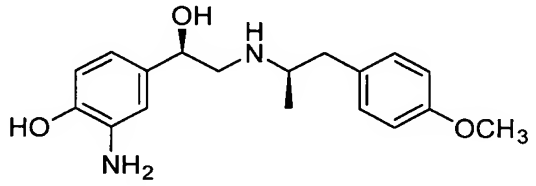
CLAIMS

1. A crystalline solid consisting of greater than 99.5% by weight of (R,R)-formoterol L-tartrate and less than 0.5% by weight of chemical impurities other than formoterol L-tartrate; said chemical impurities including less than 0.2% by weight (based on total crystalline solid) of a compound of formula **7**



7

said (R,R)-formoterol L-tartrate being at least 95% in the polymorphic form of a thermodynamically stable third polymorph (A) having peaks at the diffraction degrees with the intensity shown below in an X-ray powder diffraction pattern:

peak number	2-Theta	Intensity
1	8.8	33.1
2	9.3	33.4
3	12.1	58.1
4	12.4	60.6
5	14.2	30.9
6	15.2	87.4
7	15.5	82.8
8	16.8	69.8
9	18.9	39.6
10	19.7	41.1
11	20.8	40.6
12	22.5	38.8

13	23.0	59.9
14	23.7	100.0
15	25.6	55.9
16	26.8	37.2
17	28.6	25.6
18	30.9	37.2
19	36.1	28.0
20	38.1	25.0
21	39.1	22.7
22	41.5	21.3
23	43.3	20.9

2. A method for preventing bronchoconstriction or inducing bronchodilation in a mammal comprising administering to said mammal a therapeutically effective amount of the solid R,R-formoterol L-(+)-tartrate of claim 1.

3. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and the solid R,R-formoterol L-(+)-tartrate of claim 1.

4. An aerosol pharmaceutical composition according to claim 3.

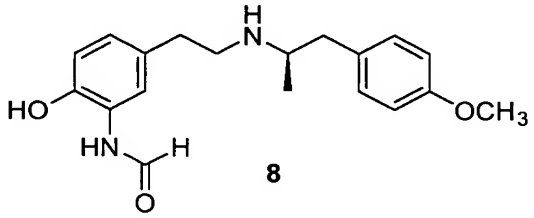
5. An oral pharmaceutical composition according to claim 3.

6. An oral pharmaceutical composition according to claim 5 in the form of a tablet, capsule or syrup.

7. A dry powder pharmaceutical composition for inhalation according to

claim 4.

8. A crystalline solid consisting of greater than 99.5% by weight of (R,R)-formoterol L-tartrate and less than 0.5% by weight of chemical impurities other than formoterol L-tartrate; said chemical impurities including less than 0.1% by weight (based on total crystalline solid) of a compound of formula **8**



8

said (R,R)-formoterol L-tartrate being at least 95% in the polymorphic form of a thermodynamically stable third polymorph (A) having peaks at the diffraction degrees with the intensity shown below in an X-ray powder diffraction pattern:

peak number	2-Theta	Intensity
1	8.8	33.1
2	9.3	33.4
3	12.1	58.1
4	12.4	60.6
5	14.2	30.9
6	15.2	87.4
7	15.5	82.8
8	16.8	69.8
9	18.9	39.6
10	19.7	41.1
11	20.8	40.6
12	22.5	38.8
13	23.0	59.9

14	23.7	100.0
15	25.6	55.9
16	26.8	37.2
17	28.6	25.6
18	30.9	37.2
19	36.1	28.0
20	38.1	25.0
21	39.1	22.7
22	41.5	21.3
23	43.3	20.9

9. A crystalline solid according to claim 8, consisting of greater than 99.5% by weight of (R,R)-formoterol L-tartrate and less than 0.5% by weight of chemical impurities other than formoterol L-tartrate; said chemical impurities including 0.05% by weight (based on total crystalline solid) or less of a compound of formula **8**.

10. A method for preventing bronchoconstriction or inducing bronchodilation in a mammal comprising administering to said mammal a therapeutically effective amount of the solid R,R-formoterol L-(+)-tartrate of claim 8.

11. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and the solid R,R-formoterol L-(+)-tartrate of claim 8.

12. An aerosol pharmaceutical composition according to claim 10.

13. An oral pharmaceutical composition according to claim 10.

14. An oral pharmaceutical composition according to claim 12 in the form of a tablet, capsule or syrup.

15. A dry powder pharmaceutical composition for inhalation according to claim 10.